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**PATENT SPECIFICATION**



**419,842**

Convention Date (France): Sept. 4, 1933.

Application Date (in United Kingdom): Oct. 21, 1933. No. 29,221/33.

Under Section 91, Sub-sections (2) and (4) (a) of the Patents and Designs Acts, 1907 to 1932, a single Complete Specification was left in respect of this Application and of Application No. 29,220/33, and was laid open to inspection on April 23, 1934.

Accepted: Nov. 20, 1934.

**COMPLETE SPECIFICATION.**

**Improvements for Converting Oscillating Motion into Rotary Motion.**

I, **RAYMOND ALEXANDRE BABEL**, a citizen of the Republic of France, of 12, Place des fêtes, Clichy, Seine Department, France, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The present invention relates to a method of transferring the reciprocating angular movements of a driving shaft into a continuous rotary movement of a driven shaft by means of two crank discs of which the crank pins are connected by rods to the ends of a balance beam mounted on the shaft to which the reciprocating movement is imparted.

According to this invention, on the shafts of the crank discs are mounted two other crank discs, of which the crank pins are connected by a connecting rod to which is jointed the crank pin of a further crank disc mounted on the driven shaft.

The invention is illustrated in the annexed drawings, in which:—

Figs. 1 and 2 are an elevational view and a plan view respectively.

In these drawings, transformation of the movement is obtained by means of a suitable system of connecting rods. At the end of a shaft 76 there is keyed a crank disc 77 carrying two crank pins 78, 79 disposed along opposite radii of said disc. On said crank pins are mounted connecting rods 78<sup>a</sup>, 79<sup>a</sup>, the other ends of which are pivoted respectively to the crank pins 80, 81 of two crank discs 80<sup>a</sup>, 81<sup>a</sup>, the shafts 80<sup>b</sup>, 81<sup>b</sup> of which turn in a continuous manner in stationary bear-

ings. These shafts further carry other crank discs 82<sup>a</sup>, 83<sup>a</sup>, the crank pins 82, 83 of which are connected together by a common rod 84 the ends of which are pivoted about said crank pins 82, 83 respectively. The middle of said common rod 84 is pivoted about the crank pin 86 of a crank disc 87 keyed on the driven shaft 75.

It will be readily understood that the angular displacements of the disc 77 cause discs 80<sup>a</sup> and 81<sup>a</sup> to rotate and to transmit their movement to disc 87 (keyed on the shaft 75) through the common connecting rod 84 pivoted about the crank pin 86.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

A method of transforming the reciprocating angular movement of a driving shaft into a continuous rotary movement of a driven shaft by means of two crank discs of which the crank pins are connected by rods to the ends of a balance beam mounted on the shaft to which the reciprocating movement is imparted, characterised in that on the shafts of the said crank discs are mounted two other crank discs of which the crank pins are connected by a connecting rod to the centre of which is jointed the crank pin of a further crank disc mounted on the driven shaft.

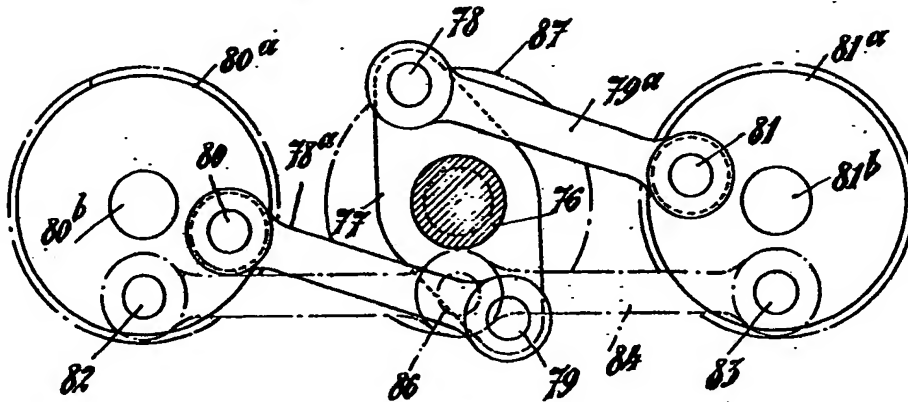
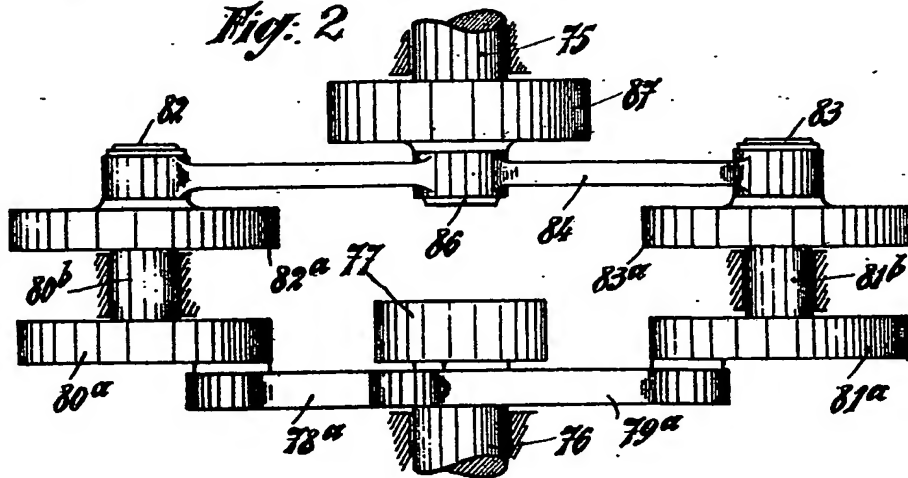
Dated this 21st day of October, 1933.

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Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1934.

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*Fig. 1.**Fig. 2.*

[This Drawing is a reproduction of the Original on a reduced scale.]